

Amendments to the Claims:

This listing of claims replaces all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) In a sending station operable to transmit a send signal, once amplified by an amplifier, the send signal formed of successive symbols, each symbol selected from a constellation of symbols, an improvement of apparatus for compensating for distortion introduced upon the send signal when amplified by the amplifier, said apparatus comprising:

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a phase rotator coupled to receive indications of the send signal prior to amplification by the amplifier, said phase rotator for selectably rotating a phase component of the send signal responsive to a characterization of an AM (amplitude modulated)-to-PM (phase modulated) response of the amplifier that defines a phase distortion characteristic of the send signal, the phase distortion characteristic responsive to an input power level of the send signal and of a substantially constant level when the input power level of the send signal is less than a first threshold; and

a distortion estimator coupled to receive the indications of the send signal prior to amplification by the amplifier and to receive indications of the send signal subsequent to amplification by the amplifier, said distortion estimator for estimating an indicia of distortion of the send signal due to amplification thereof by the amplifier, the indicia of distortion at least related to a normalized, standard deviation of differences determined between values of the symbols, prior to amplification by the amplifier and subsequent to amplification by the amplifier and for providing a distortion estimate signal to said phase rotator, values of the distortion estimate signal determinative of rotation by said phase rotator of the phase component of the send signal.

2. (Canceled)

3. (Previously Presented) The apparatus of claim 1 wherein the characterization of the AM-to-PM response of the amplifier comprises at least a first parameter and wherein the distortion estimate signal comprises a value of the at least the first parameter.

4. (Canceled)

5. (Previously Presented) The apparatus of claim 1 wherein said distortion estimator further determines a value of the input power level of the send signal and wherein the distortion estimate signal comprises an indication of the value of the input power level determined thereat.

6. (Canceled).

7. (Previously Presented) The apparatus of claim 1 wherein the phase distortion characteristic is proportional to the input power level of the send signal when the input power level is at least as great as the first threshold.

8. (Canceled)

9. (Canceled)

10. (Original) The apparatus of claim 1 wherein the sending station is further selectably operable to apply training data to the amplifier, the training data of known values, wherein said phase rotator is coupled to receive indications of the training data, and wherein said distortion estimator estimate an indicia of distortion of the training data due to amplification of the training data by the amplifier.

11. (Original) The apparatus of claim 1 wherein the sending station is operable in a communication system which utilizes a QPSK (Quadrature Phase Shift-Keying) scheme, the send signal formed of QPSK symbols defined in the QPSK scheme, said phase rotator for rotating the phase components of the QPSK symbols responsive to values of the distortion estimate signal.

12. (Previously Presented) The apparatus of claim 11 wherein the sending station forms a portion of a radio transceiver operable in a CDMA (code-division,

multiple-access) cellular communication system, wherein each QPSK symbol includes a phase component and a magnitude component, and wherein rotation of the phase component caused by said phase rotator alters the phase component of the QPSK symbol without altering the magnitude component of the QPSK symbol.

13. (Currently Amended) In a method for sending a send signal, once amplified by an amplifier, at a sending station, an improvement of a method for compensating for distortion introduced upon the send signal when amplified by the amplifier, said method comprising:

characterizing an AM (Amplitude Modulation)-to-PM (Phase Modulation) response of the amplifier, the AM-to-PM response of the amplifier defining a phase distortion characteristic of the send signal, the phase distortion characteristic of a substantially constant level when an input power level of the send signal is less than a first threshold;

estimating an indicia of distortion of the send signal due to amplification thereof by the amplifier and a value of the input power level of the send signal, the indicia of distortion at least related to a normalized standard deviation of differences between values of the send signal prior to and subsequent to amplification by the amplifier; and

selectably rotating a phase component of the send signal responsive to the value of the at least the phase distortion characteristic of the send signal.

14. (Original) The method of claim 13 wherein the send signal comprises a phase component and a magnitude component and wherein said operation of selectably rotating rotates the phase component of the send signal without altering the magnitude component of the send signal.

15-19. (Canceled)

20. (Currently Amended) The method of claim 14 ~~19~~ wherein the phase distortion characteristic is proportional to the input power level of the send signal when the input power level is at least as great as the first threshold.

21. (Currently Amended) In a sending station operable to transmit a send signal, once amplified by an amplifier, an improvement of apparatus for compensating for distortion introduced upon the send signal when amplified by the amplifier, said apparatus comprising:

a phase rotator coupled to receive indications of the send signal prior to amplification by the amplifier, said phase rotator for selectably rotating a phase component of the send signal responsive to a characterization of an AM (Amplitude Modulation)-to-PM (Phase Modulation) responsive of the amplifier that defines a phase distortion characteristic of the send signal, the phase distortion characterization of a substantially constant level when the send signal is less than a first threshold; and

a distortion estimator coupled to receive the indications of the send signal prior to amplification by the amplifier and to receive indications of the send signal subsequent to amplification by the amplifier, and to receive indications of the send signal subsequent to amplification by the amplifier, said distortion estimator for estimating an indicia of distortion of the send signal due to amplification thereof by the amplifier, the indicia of distortion at least related to a normalized, standard deviation of differences between values of the send signal prior to, and subsequent to, amplification by the amplifier, and for providing a distortion estimate signal to said phase rotator, values of the distortion estimate signal determinative of rotation by said phase rotator of the phase component of the send signal.

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